

Investigator: Gerard B. Connolly

Site: Diamond Alkali OU# 2, Newark, N.J.

ID#: 5TGB02D6BN

Date: April 27, 1995

SUBJ: Interview with George Radan.

On the date indicated above at about 10:00 am, this investigator and Mr. Lance Richman interviewed Mr. George Radan. Mr. Radan is a former Baldwin-Montrose Chemical Company (Montrose) employee. Mr. Radan currently resides at 505 West End Avenue, New York, N.Y., SSN# 077-24-8158, age 75, DOB: 09/03/19, tel# (212) 873-0510.

Mr. Radan stated as follows:

He attended the University of Zagreb from 1938 to 1941. He is a 1946 graduate of the University of Geneva, graduating as an *Ingenieur Chimiste* from the *Ecole de Chemie*. He was employed by Warner Institute, Continental Foods Inc., Athens Food and Oil Refining Co., and Chemo-Puro Manufacturing Co., before joining Montrose at their plant located in Newark, N.J., in 1951. He worked for Montrose until he was discharged in 1966. After leaving Montrose, Mr. Radan worked as a salesman for a brief period and subsequently was employed by the U.S. Government with the Department of Agriculture and the Environmental Protection Agency from 1967 until his retirement in 1989.

Mr. Radan was employed by Montrose as a Research Chemist at the Lister Avenue facility. He reported to Jacob Rosin the Chief Chemist, with whom he authored an article entitled "Determination of Gamma-Benzene Hexachloride" which was published in Analytical Chemistry, the May 1953 issue. A copy of Jacob Rosen's employment recommendation for Mr. Radan is included with this summary.

Mr. Radan stated that Benjamin Rothberg was in charge of operations at the facility. Samuel Rothrosen was the Treasurer for Montrose. Mr. Radan stated that both men were aware of all products produced by at the facility by Montrose. He also stated that the two men would meet and discuss which chemical products were to be produced at the facility.

Mr. Radan recollected a number of other employees who worked at the plant. Marty Pine who Mr. Radan believes is living in Fairlawn, New Jersey lost an eye in an explosion that occurred at the Montrose facility. Mr Pine continued to work at Montrose after Mr. Radan left in 1966. Mr. Radan also remembered Sol Koved who Mr. Radan said worked in production and Paul Menyharth who worked in the laboratory.

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When asked about products manufactured at Montrose. Mr. Radan was unsure if 2,4-D or 2,4,5-T were produced at Montrose' Lister Avenue facility. When shown a copy of an earlier statement, Mr. Radan could not remember the basis for his statement that 2,4,5-T and 2,4-D were manufactured at that location. He was aware that DDT was produced by Montrose in Nevada. At this point, Mr. Radan stated that a co-worker, Mr. Sol Koved had a thorough knowledge of Montrose' products and if he stated 2,4-D and 2,4,5-T were produced, then they were most likely produced at the Montrose facility.

Among the products Mr. Radan recalled being produced by Montrose was the organic insecticide - Benzene Hexachloride (BHC) and its gamma isomer. During the production of BHC, benzene was chlorinated under ultraviolet light to optimize the percentage of the Γ (gamma) isomer in the process. Production of BHC at the facility occurred for at least 10 years. The α (alpha), β (beta), Γ isomers were stored in warehouse at the facility. Chlorine for this process was shipped to Montrose in tank cars and cylinders. Mr. Radan stated that Montrose was connected with Stauffer Chemical at one time and that Stauffer Chemical was involved in the production of DDT in Europe.

Mr. Radan did not recall any significant flooding at the facility. He did mention that on occasion the sewers would back up causing some small scale flooding at the facility. Mr. Radan did not recall employees walking to the Passaic River during meals or breaks on a regular basis, but he did remember going there himself on occasion.

THE INFORMATION I HAVE PROVIDED IN THIS INTERVIEW IS TO THE BEST OF MY KNOWLEDGE TRUE, ACCURATE AND COMPLETE.



George Radan



NYC, JUNE 14/95

Dear Mr. Connolly:

This letter is fine and I signed it.
Thank you for my copy. Since I
am interested in Baldwin-Harrison
"highway" please keep me informed
if you can do so.

Best regards. Sincerely,

George Rodin

P.S. I may come "down" after the
summer, but would call you before.

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Mr. Gerard B. Connolly
Civil Investigator
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Investigator: Gerard B. Connolly

Site: Diamond Alkali, Newark, New Jersey.

Date: 6/08/94.

Subj: Summary of Interview with Peter Lewesky.

On the date indicated above this investigator and Lance Richman, Remedial Project Manager for the Diamond Alkali Superfund Site, conducted a telephone interview of Mr. Peter Lewesky, a former employee of Montrose Chemical Company. Mr. Lewesky currently resides at 14919 N. E. 163 Street, Woodinville, Washington 98072, Tel (206) 481-2939. Mr. Lewesky is 73 years old, DOB 07/04/21.

Mr. Lewesky stated as follows:

I worked for Montrose Chemical Company for 35 years. I started in 1949, and worked until the plant closed in 1977. I initially worked as an operator. In 1951, I became a foreman and sometime later a production supervisor.

We manufactured dichlorodiphenyl trichloroethane (DDT), benzene hexachloride (Lindane), 2,4-Dichlorophenoxyacetic acid (2,4-D) and Tricresyl Phosphate (TCP).

2,4-D was manufactured by chlorinating phenol which was then reacted with the caustic, sodium hydroxide. The phenol was reddish in color. The final product was light. It was clarified in lead-lined steel tank. Hydrochloric acid from the process was sold. Production of this compound began before I started working at the facility. 2,4-D was produced for a couple of years.

Lindane was chlorinated under ultraviolet light. Lindane was crystallized out and an alpha isomer compound was left. The alpha isomer was placed in a pile in the yard.

The drainage system consisted of collection troughs. They were connected to the city sewer system in front of the facility on Lister Avenue. I do not recall any connections directly to the Passaic River, however, the river would overflow periodically and our plant would be flooded.

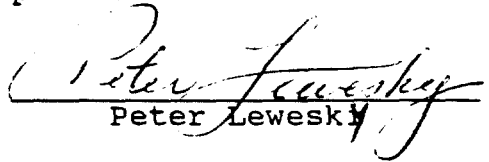
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I remember that Paul Hammer and Frank Redis were Plant Managers. Pincus and Benjamin Rothberg were owners and were present at the plant every day. They were aware of all the products that were made at the facility.

I recall we had an explosion at the plant. I don't remember when it happened. I don't recall a release of product or a fire occurring. No one was injured

The information I have provided in this interview is, to the best of my knowledge true, accurate and complete.


Peter Lewesky

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Investigator: Gerard B. Connolly

Site: Diamond Alkali, Newark, New Jersey.

ID#: 4TGB02D6BN, CIIS# : 93012, Date: 06/08/94.

Subj: Summary of interview with Thelbert Cameron.

On the date indicated above this investigator and Lance Richman Remedial Project Manager for the Diamond Alkali Superfund Site conducted a telephone interview with Mr. Thelbert Cameron (201) 759-5228. Mr. Cameron currently resides at 11 Quinton Street, Bellville, New Jersey 07109. Mr. Cameron is 69 years of age, DOB 04/28/25.

Mr. Cameron stated as follows:

I worked for Montrose Chemical Company from 1957 to 1977. I started as an Operator B. Sometime between 1957/60 I was promoted to Operator A. Then around 1964/65 I was promoted to foreman. In 1977, the operation closed and I went to work for another company. In 1978, I returned to the facility to work for Waste Management. As a foreman I supervised approximately four (4) people. These people worked on four(4) different operations for one or two different products.

I remember Kelsey Brown. He was my supervisor.

George Cook was a shift supervisor.

I think Benjamin Rothberg was the owner. Peter Lewesky was the plant supervisor. As a foreman I reported to Mr. Leweski. I don't remember any of the shift workers I worked with.

As an Operator B, I worked on the production of benzene hexachloride. As far as bulk materials are concerned I remember hooking up hoses from tank cars. The liquid I worked with had a brown-grey color. Once in a while we would have a spill or leak of liquid. We would clean it up with soda ash and water. The water would go into a drain that went to a holding tank. I can remember heating a liquid until it lightened in color in this process. I also recall loading materials from 50 lb bags and 100 lb drums into vats for processing.

The floor of the facility was comparatively clean. There was some spillage from broken lines but we cleaned the floor at the end of each shift and left a clean floor for the next shift. The floor was pitched toward the floor drains. There were ditches in the floor that were concrete. The liquid that ran through the drains was grey, grey brown, dark grey or dark to light brown. The drains went to a holding tank at the front of the plant.

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I remember in winter, I can't remember the year, having to leave the plant because of flooding. The plant was completely flooded with water from the Passaic River. I would go down to the river about once a month.

I remember an accident in which a line was blocked and an explosion occurred. No one was injured and some liquid was spilled.

Investigator : Gerard B. Connolly

Site: Diamond Alkali, Newark, New Jersey.

Date: 02/02/94.

SUBJECT: Summary of interview with Mr. Kelsey Brown.

On the date indicated above at about 10:40 am, this investigator and Lance Richman, Remedial Project Manager for the Diamond Alkali Superfund site interviewed Mr. Kelsey Brown at his residence, 23 Crescent Drive, Andover, New Jersey 07821 Tel (908)852-6145. When interviewed regarding his employment at Montrose Chemical's Lister Avenue facility in Newark, New Jersey, Mr. Brown stated as follows:

I was made aware that DDT production began at Montrose Chemical's Lister Avenue facility in the 1940s through conversations with co-workers who were employed at Montrose before I started there. I was told that chlorination of phenols associated with DDT ~~production caused explosions at the facility.~~ ^{WERE CONDUCTED} DDT was not produced during the course of my employment at Montrose Chemical. We did manufacture benzene hexachloride which is commonly known as Lindane.

I was employed by Montrose Chemical from March of 1951, to March of 1963. I started there after graduating from college. For the first two months I worked as a chemical operator. I was promoted to Assistant Shift Supervisor, then, after one year, I was promoted again to Shift Supervisor. I held that position until I left Montrose Chemical in 1963. As an operator I was responsible for operating the equipment used in manufacturing the chemicals produced at Montrose. As an Assistant Shift Supervisor and Shift Supervisor I supervised other employees and conducted batch testing on samples of products being manufactured. There were between seven (7) to ten (10) operators per shift producing about eight chemicals at the Lister Avenue facility. The plant had three shifts. I reported to Pete Lewiski the Assistant Plant Manager.

Benjamin Rothberg was the President of Montrose Chemical. Samuel Rothrosen was the Office Manager. He ~~(Rothrosen)~~ specified the products to be manufactured to the Plant manager. ^{ROTHBERG}

Among the chemicals that were produced at Montrose Chemical during my tenure were the following:

Benzene hexachloride
Chloral hydrate U.S.P. ^{KB}

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DDVP (Vapon) (an insecticide)
Dimethyl-isophthalate
Diethyl-phthalate
Hexachlorobenzene (this was produced only once in 1957,
specifically for use in Africa to combat a locust infestation)
Tricresyl Phosphate (TCP)
Triphenyl Phosphate

TCP is not the same compound as 2,4,5-T (2,4,5 trichlorophenol) or 2,4,5-TCP (2,4,5 trichlorophenoxy acetic acid (Silvex)). 2,4,5-T is a chloral compound. Neither 2,4,5-T, 2,4,5-TCP or 2,4-D (2,4 dichlorophenoxy acetic acid) were manufactured at Montrose Chemical while I was there. No "chlorinated" tricesyl phosphate was made at the facility while I was there. Compounds such as tricresyl phosphate (TCP) and triphenyl phosphate were manufactured by adding ~~phosphate~~ to phenol or cresol.

Phosphorus oxychloride CB

During the production of benzene hexachloride, the alpha isomers were separated from the compound as a waste solid. The waste which was washed with benzene, was steam dried to remove the benzene. This solid waste was a powder. It was stored out of doors, uncovered, on a concrete pad. Tests were conducted to ensure that all benzene had been removed. However, it was possible that trace amounts of benzene remained on the powder. It is possible that the benzene remaining on the powder could have been washed off by rainwater. Solid waste from this process was stored in this manner from the time I began my employment at Montrose in March, 1951 to, late in that year when a process was developed to convert the alpha isomer to trichlorobenzene.

The benzene used in the wash process was distilled off and reused. Residue from the distillation process was accumulated in barrels. The Plant Manager or Assistant Plant Manager would know who disposed of it.

Phosphorus oxychloride CB

TCP was produced by reacting cresol with ~~sodium phosphate~~. The product was acidic. The mixture was pumped into a 9,000 or 10,000 gallon tank with water and sodium hydroxide. The mixture went to a washing tank where the excess water was skimmed off. The product would be washed until all the ~~phenol~~ was gone. The waste water generated by this process became clearer with each wash. I remember incidents where the product was accidentally skimmed off instead of the water. The waste water that was discharged from this process was a dark, milky color. It was discharged into the city sewer system. I never went to the river and therefore I did not observe outfall pipes or drains at that location. ALL PLANT SEWERS WENT INTO THE CITY SEWER SYSTEM. CB

The TCP would be held in a second tank and not discharged to the sewer system. The floor in the area where TCP was drummed was wet

with spilled TCP. We used speedy dry to clean up these spills. I recall the plant being flooded when the sewer on Lister Avenue backed up.

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After I left the Lister Avenue facility, Montrose began to produce ~~malonitrile~~ for use in CS, ~~CS~~ (tear gas). This compound ~~was~~ periodically stored in one of the three underground storage tanks at the front of the facility on Lister Avenue.

The information I have given in this interview is, to the best of my knowledge, true, accurate and complete.

Kelsey Brown

Kelsey Brown

Call me if any questions about the corrections

Kelsey Brown

Investigator: Gerard B. Connolly

Site: Diamond Alkali, Newark, New Jersey.

ID#: 4TGB02d6BN, CIIS#: 93012, Date: 01/25/94.

SUBJECT: Summary of Interview with Oscar Randell.

On the date indicated above at about 10:00am, this investigator and Lance Richman, Remedial Project Manager for the Diamond Alkali Superfund site, interviewed Mr. Oscar Randell at his residence, 1264 Marcella Avenue, Union, New Jersey, Tel (908) 687-4650. When interviewed regarding his employment at Montrose Chemical Company's Lister Avenue facility in Newark, New Jersey, Mr. Randell stated as follows:

I worked for Montrose Chemical Company from 1951 to the end of 1977. I started work as a Class B operator working in the production of various chemical products. Mr. Kelsey Brown was my boss. I worked with another Class B operator, Thelb Cameron, who presently lives in the Newark, New Jersey area (Belvedere N.J., Tel (201) 759-5228.) I also remember working with an employee named Mo Franklin who is now deceased.

I remember Samuel Rothrosen and Benjamin Rothberg as being at the facility. Mr. Rothrosen was a laboratory chemist and Mr. Rothberg was an official of the company who worked in the main office. Mr. Rothrosen would supply me with the paperwork on the chemical process that I was tasked to implement.

From 1951 to 1956 the company was Montrose Chemical Co., after 1956, the company was owned by Baldwin Chemical Company, then Chris Craft and subsequently IMC which ended operations in 1977. In January of 1978, SCA (Southland Chemical) took over activities at the plant.

The Montrose produced DDT from 1951 to about 1953/54. After that date this operation was moved out west to California. TCP (Tricresyl phosphate) was produced at Montrose during the entire course of my employment. It was produced for Shell Oil Company as an additive for its gasoline. DMI was also produced for sale to the Goodyear Tire and Rubber Company. Thelb Cameron worked on TCP production with me.

TCP production was as follows:

Cresol, a corrosive liquid, was brought on site in tank cars. It was a brown liquid and had a distinct smell. Cresol was pumped into a 2000 gallon vat placed outside for this

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purpose. A dry chemical which was packaged in individual bags was added. This mixture was then pumped into a thermal jacketed tank that was heated by a Dixon boiler to a temperature of 500°C for eight hours. A lab sample was taken for analysis. If the process product was not up to the appropriate specifications, further processing would occur. If the sampled process product was satisfactory the mixture was run through condensers and transferred to a big (10,000 gallon) round tank. A mixture containing 98% sulfuric acid was added. The amount of acid added was determined by measuring the volume increase in the tank in inches from calibrations on the tank. Three, five-gallon buckets of a black, dry chemical were then added from a 400-500 lb drum. The process product was then mixed by an agitator in the tank. As the chemical was added the mixture changed color to a "beautiful deep red". The process product was heated and five gallon buckets of an additional white, "sugar-like" chemical were added from a 500 lb paper container. After about 1/2 hour the process product turned crystal clear and had the consistency of vegetable oil. The process product was again sampled. If satisfactory, the process product then went to a wash tank. The process product settled to the bottom of the tank while water from the washing process remained on top. An arm skimming the surface of the inner tank removed the wash-water to an overflow tank. The decanted water was discharged via a Montrose 4" outflow pipe directly into the Passaic River. On one occasion in 1957/58, a worker assigned to one of the three shifts allowed the arm to sink to the bottom of the wash tank. The result was that the entire run of product was discharged into the Passaic River. The worker was fired but no report of the incident was made. The wash-water, which was visible through the floor grating, flowed in drains that were connected to a 4" out flow pipe. The wash-water was a white, milky liquid. I observed the liquid both in the plant drains and discharging via the 4" outfall pipe to the Passaic river. After three washes the material was sampled. If satisfactory, it was sent to 4000 gallon, insulated drying tank. The drying tank contained a "steam jet vacuum" to remove any additional water. The tank used steam heat at a temperature of between 80-90°C. The drying took about eight hours. The finished product was then pumped into a 4000 gallon holding tank. When ready for shipment, it was pumped via a 2" line to the drumming area. The product was spilled regularly. The floor was always sticky with product. The concrete floor required regular repaving because of the spills of product. At times the floor was washed with caustic to remove the product. Any waste water went to the Passaic river. This process remained the same throughout my tenure at the facility. I estimated that between 3000 and 3500 gallons of TCP were produced three time a week.

Many of the iron drainage pipes at the plant would corrode. Employees would then have to jackhammer the pipes out and replace

them. They eventually placed down plastic drainage pipes.

In 1957/58 a 2" pipe used to pump Cresol from tank cars ruptured causing Cresol, a corrosive, to "spill all over." I and other workers routinely dumped five gallon pails of waste cresol into the Passaic River instead of using a waste tank in place for that purpose.

Some time between 1958 and 1960 the river backed up and flowed onto the plant. The water was waist high. Subsequent to the flood, pumps and motors were moved off of the floor because a number of them had shorted out during the flood.

DMI production was as follows:

DMI was produced in a 4000 gallon tank. It did not need to be washed. 2000 gallons of methanol were used. The methanol had a sweet smell. The methanol was combined with 300, 50 lb bags of dry chemical that were carried to the top of the tank by hopper. A five gallon pail of a substance containing sulfuric acid was added as a catalyst. The tank was closed. The mixture was heated to over 500 degrees using diatherm heat from the Dixon boiler. The heating continued for more than ten hours, after which the methanol was pumped off to an under ground tank located in front of the plant. The DMI was in a holding tank where a "slop cut" was made to a 500 gallon tank. After 1/2 hour, the material was light tested. It was crystal clear. The liquid was then distilled in an insulated tank. 2000 or 3000 gallons of finished product were stored at the plant. The product looked like white snow. Approximately two deliveries a week were made to Goodyear Tire and Rubber Company for a total of 6000 gallons of product.

Concerning DDT production, I was required to scrape hardened material from product pans. This was done wearing a rubber suit and gas mask. The product was then chopped up and shipped, in cotton containers, to California.

I worked almost exclusively on TCP and DMI production.

Three railroad tank cars were buried in front of the plant in the vicinity of Lister avenue. The three tank cars, which went by the numbers 31, 32, and 33, had 10,000 gallon capacities. They were removed by SCA in 1980. I observed the tank-car removal and that is how I learned they were railroad tank cars. The tanks were rusted and falling apart. One of the tanks was used for methanol recovery during manufacturing, another was used to hold "melano". I believe it was used in the production of tear gas.